

Rye APA

- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **35**
- SRM **4.2**
- Style **American Pale Ale**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **76 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.2 liter(s)**
- Total mash volume **22.1 liter(s)**

Steps

- Temp **66 C**, Time **50 min**
- Temp **77 C**, Time **10 min**

Mash step by step

- Heat up **17.2 liter(s)** of strike water to **72.6C**
- Add grains
- Keep mash **50 min** at **66C**
- Keep mash **10 min** at **77C**
- Sparge using **13.4 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.2 kg (85.7%)	80 %	5
Grain	Żytni	0.7 kg (14.3%)	85 %	8

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %
Boil	Iunga	15 g	60 min	11 %
Whirlpool	Cascade PL	30 g	0 min	5.2 %
Dry Hop	Cascade PL	50 g	3 day(s)	5.2 %
Dry Hop	Eureka!	50 g	3 day(s)	18 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	---

Extras

Type	Name	Amount	Use for	Time
Water Agent	Chlorek wapnia	5 g	Mash	---
Water Agent	Gips piwowarski	5 g	Mash	---